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Connecticut - Joint Senate and House Committee on Children
Re: HB 6806

Hartford, CT

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Introduction

Co-chair Bartolomeo, Co-chair Urban and members of the Committee on Children. My name is Thomas Osimitz. By way of background, I have a doctorate degree in toxicology and am certified in toxicology by the American Board of Toxicology (DABT) and am also a European Registered Toxicologist (ERT). I am here to speak on behalf of the American Chemistry Council (ACC). Under their auspices, I am Chair of the Science Advisory Council (SAC) of the North American Flame Retardant Alliance (NAFRA). I am speaking in opposition to HB 6806, An Act Concerning Toxic Flame Retardants In Children's Products.

Key Points

I would like to discuss the:

1) Need to examine the flame retardants (FRs) as individual chemicals and not group their toxicological and environmental fate properties together unless the data warrant;
2) Importance of considering exposure potential and risk.

Need for Examination of Chemicals Individually

The proposed legislation makes no distinctions between the various FRs under consideration. This is overly simplistic. Even if we just consider the properties of toxicology and environmental fate (i.e., persistence), it is apparent that each FR has its own constellation of characteristics. The USEPA's Design for Environment hazard assessment for FRs used in flexible polyurethane foam (2014) presents tables that show these properties for the various FRs. Clearly not all FRs have similar toxicology and environmental fate attributes.

Importance of Considering Exposure Potential and Risk

Risk in Context

Risk to humans and/or the environment is a function of both toxicity, a property inherent to the chemical, and the extent of exposure that a human or environmental species receives. We are exposed to many chemicals, both natural and synthetic, every day that have inherent toxicity, but because of the level of exposure and/or our body's ability to detoxify many of these chemicals, risk is low or nonexistent.

The presence of a chemical needs to be considered in relation to actual levels that might cause adverse effects to human health or the environment. As the Centers for Disease Control and Prevention makes clear in its National Report on Human Exposure to Environmental Chemicals, has "The presence of an environmental chemical in people's blood or urine does not mean that it will cause effects or disease. The toxicity of a chemical is related to its dose or concentration, in addition to a person's individual susceptibility. Small amounts may be of no health consequence, whereas larger amounts may cause adverse health effects."[1]

The primary value of a risk assessment is to aid in the establishment of priority for action. Some exposures to certain population may warrant potential management such as regulation, labeling or restrictions, whereas others may not require any action.

The Example of Published Risk Assessments

I have mentioned the importance of doing risk assessments. As an example, I have two examples of risk assessments that have been done on TBBPA, a widely used FR. The first is one conducted by the European Chemicals Bureau. This focused on human health aspects of TBBPA and was published in 2006. In addition to a very thorough review of the hazard data available at the time, the Bureau reviewed in great detail potential exposures to workers, occupationally exposed to the chemical as well as people exposed in the environment and from consumer exposures. The document is highly quantitative and considers all aspects of potential risk. The conclusion of this assessment with regard to consumer exposures, was:

> "There is at present no need for further information and or testing and for risk reduction measures beyond those which are being applied already."

The most recent assessment was one conducted by Environment Canada and Health Canada published in November 2013 again, much like the European Union assessment this document details not only hazard but also a variety of potential exposures to the environment and to humans. Among their conclusions is that:

> Based on the adequacies of the margins between upper bounding estimates of exposure to TBBPA and critical effect levels, it is concluded that TBBPA does not meet the criteria under paragraph 64(**c**) of CEPA 1999 as it is not entering the

environment in a quantity or concentration or under conditions that constitute or may constitute a danger in Canada to human life or health."

Supporting these conclusions is a fairly extensive document, the details that I won't go into here. And, I'll point out that such risk assessments are to be revised as new data become available. But the most important point here is the EU and Canadian documents illustrate a workable approach to rigorously assess exposure and risk to establish priorities that will have the maximum public health benefit. I encourage the State of Connecticut to build their assessment off of these documents and to consider the specific exposures and risk of a specific flame retardant before acting to restrict the substance.

Thank you very much for the opportunity to speak with you today and I would be glad to answer any questions.

[1] Fourth National Report on Human Exposure to Environmental Chemicals, 2009, Executive Summary, p. 3.